



Industry & Local 338 Pension Plan Preliminary July 1, 2021 Actuarial Valuation & Projections

February 18, 2021

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Today's Discussion

- **Preliminary July 1, 2021 Actuarial Valuation**
 - Summary
 - Historical Information
 - 2021 Survey of Capital Market Assumptions
 - Preliminary July 1, 2021 Valuation Results
 - Withdrawal Liability
- **Funding Projections**
- **Appendix**
 - Contribution Rate Summaries
 - Summary of Assumptions and Methods
 - Summary of Plan Provisions

Preliminary July 1, 2021 Actuarial Valuation: Summary & Historical Information

Information presented in this report for plan years prior to July 1, 2015 is based on the prior actuary's reports.

Summary of Results

*Preliminary Valuation
Results as of July 1, 2021*

■ Pension Protection Act of 2006

- The Plan was certified in Green Zone for the July 1, 2021 Plan Year.
 - The Plan was also certified in Green Zone for the July 1, 2020 and July 1, 2019 Plan Years, after being certified in Critical Status as of July 1, 2018.

■ Funded Percentage

- As of July 1, 2021, the Plan is 92.1% funded using the Actuarial Value of Assets and 100.2% funded based on the Market Value of Assets.
- As of July 1, 2020, the Plan was 89.0% funded using the Actuarial Value of Assets and 84.9% funded based on the Market Value of Assets.

■ Minimum Funding Requirements

- Funding Standard Account balance is positive and is projected to remain positive under a projection of the Plan's funded status using:
 - Valuation assumptions, including 7.25% return on investments in all future years
 - Current Plan provisions
 - Contribution rates included in current Collective Bargaining Agreements (CBAs)
 - Level future employment

■ Withdrawal Liability

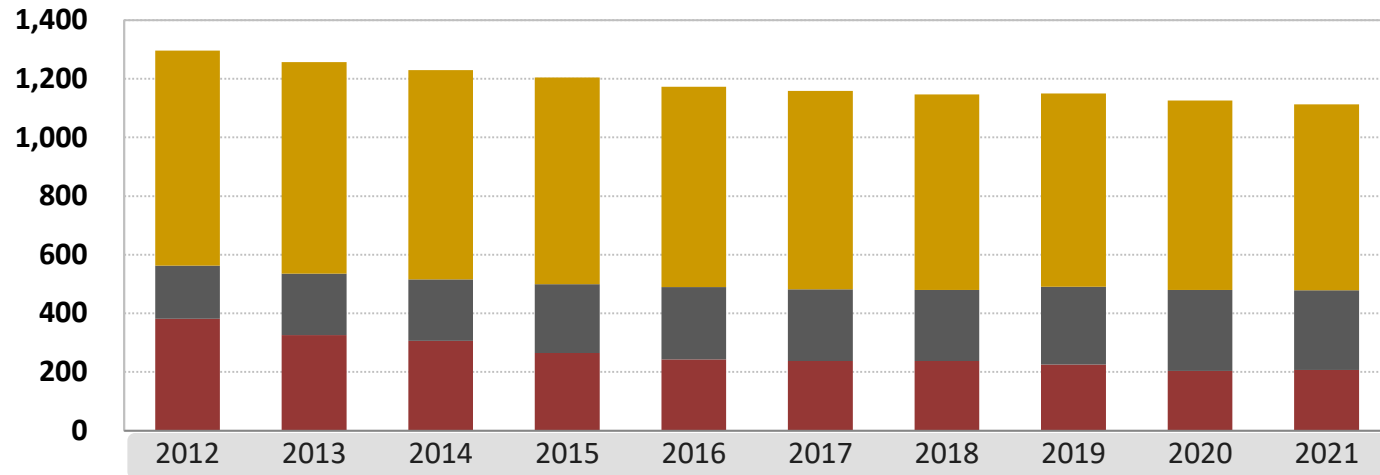
- The Plan has unfunded vested benefits as of June 30, 2021 (based on Market Value of Assets).
- All employer withdrawals should be reviewed to determine if withdrawal liability should be assessed.

Participation

**Preliminary Valuation
Results as of July 1, 2021**

Industry & Local 338 Pension Plan

Participation as of the Valuation Date



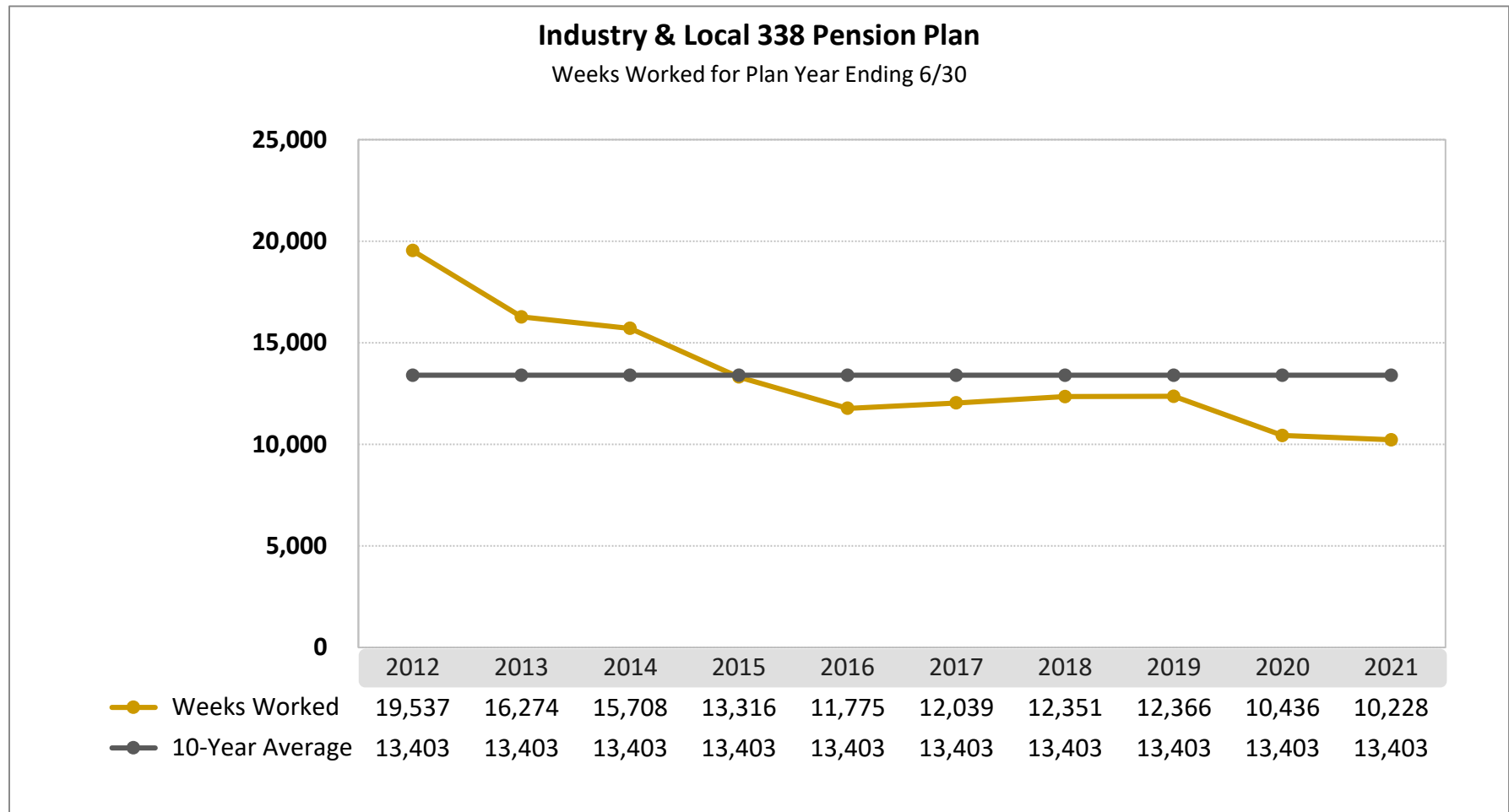
■ Retirees & Beneficiaries	733	722	714	706	683	677	667	659	646	634
■ Inactive Vested Participants	181	209	210	234	247	244	242	265	276	272
■ Active Participants	382	326	306	265	243	238	238	226	204	207
Total Participants	1,296	1,257	1,230	1,205	1,173	1,159	1,147	1,150	1,126	1,113
Ratio of Inactives to Actives	2.39	2.86	3.02	3.55	3.83	3.87	3.82	4.09	4.52	4.38

Notes

- 1) All participants of Crowley Foods (Binghamton) were considered Inactive as of July 1, 2015.
- 2) All participants of Culinar are considered Inactive as of July 1, 2019
- 3) All participants of College of New Rochelle are considered Inactive as of July 1, 2020 (withdrawn August 9, 2019).
- 4) Retiree and Beneficiary counts above exclude Alternate Payees awarded plan benefits under a QDRO.

Weeks Worked

*Preliminary Valuation
Results as of July 1, 2021*

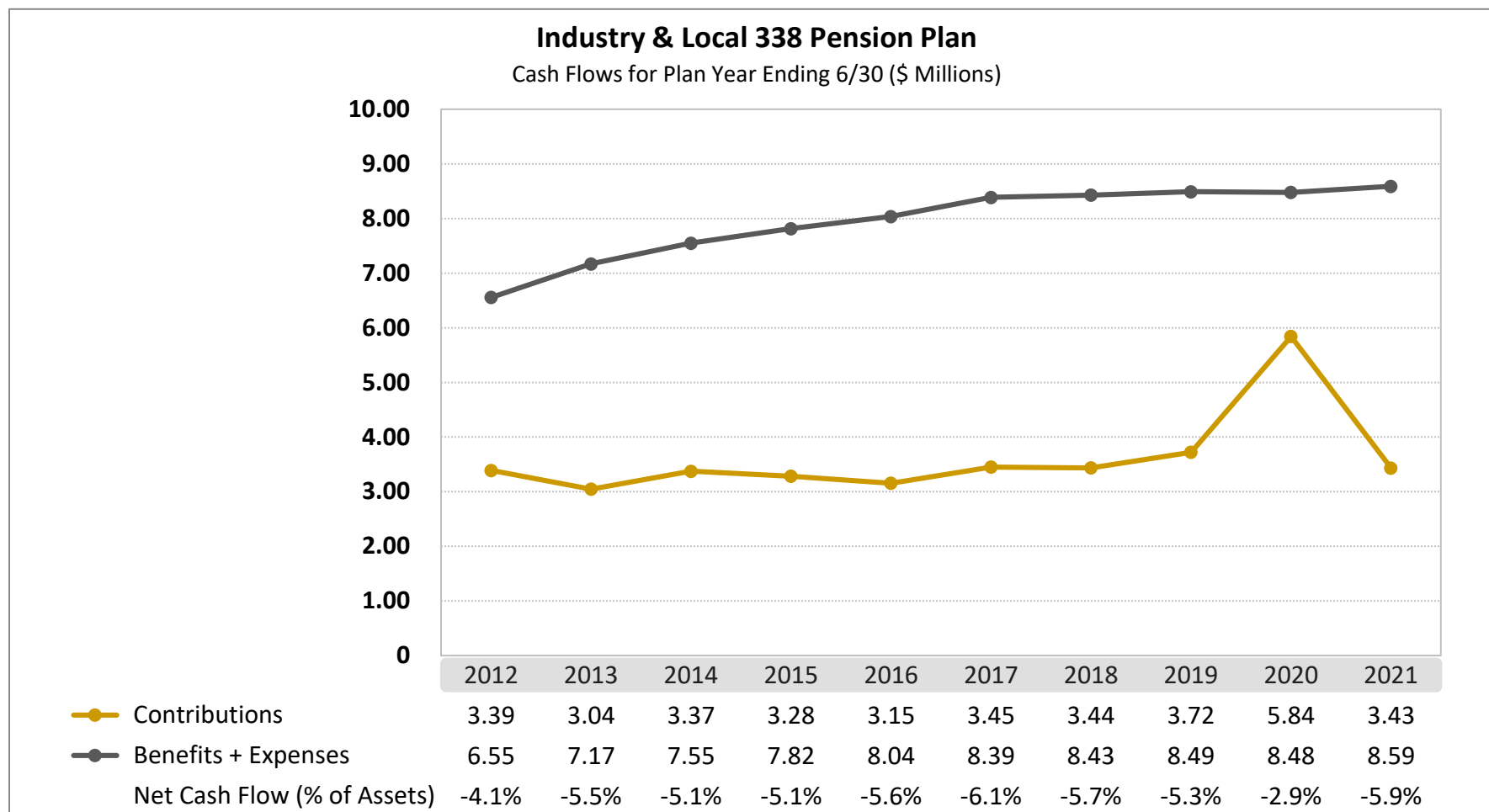


Notes

- 1) The 10-year Average shown for all years represents the annual average for the 10 plan years ending June 30, 2021.

Cash Flows

*Preliminary Valuation
Results as of July 1, 2021*

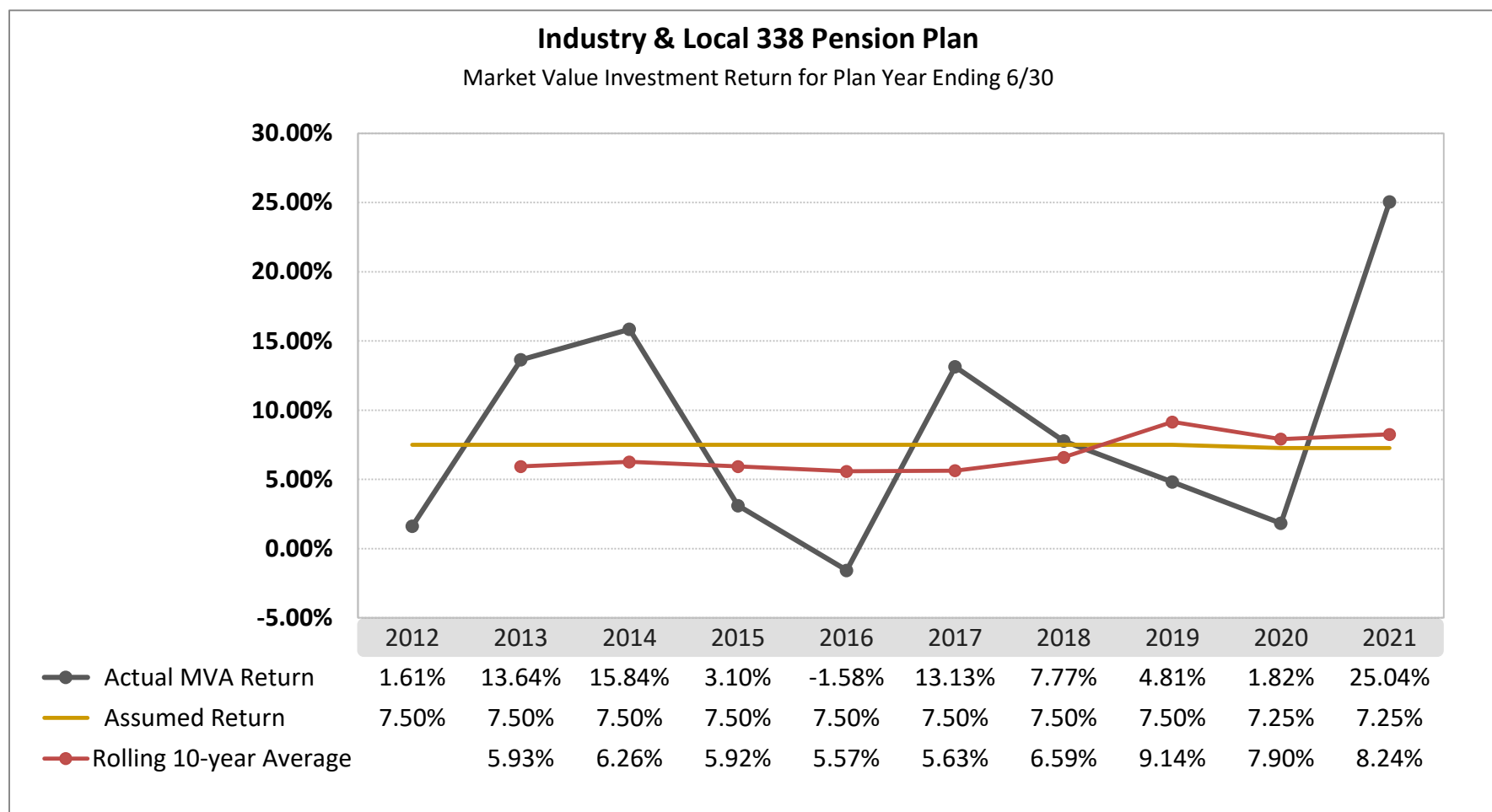


Notes

- 1) Contributions include withdrawal liability payments.

Investment Returns

*Preliminary Valuation
Results as of July 1, 2021*

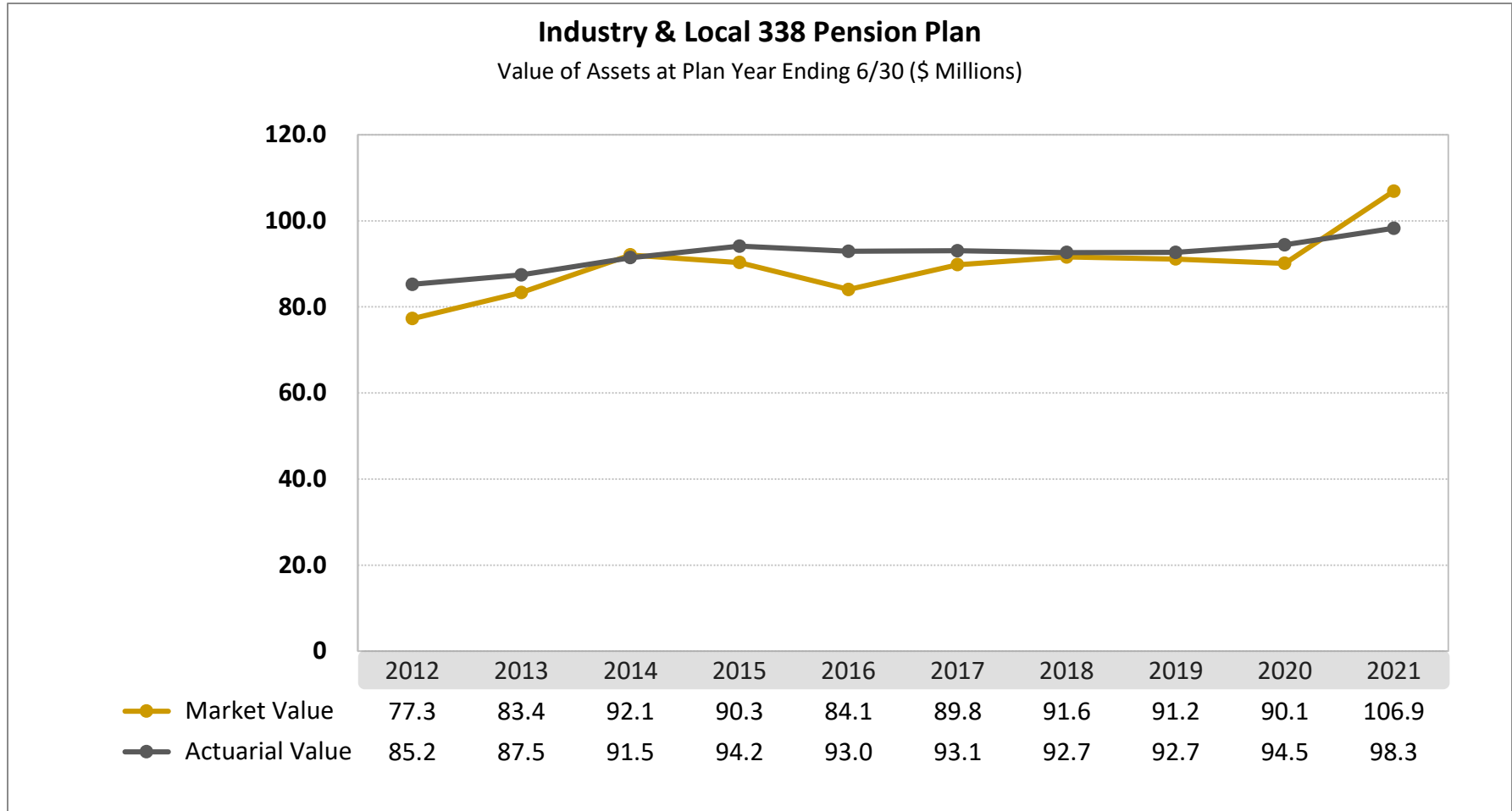


Notes

- 1) The Rolling 10-year Average shown represents the annual average geometric return for the 10 plan years ending on each respective valuation date.

Value of Assets

*Preliminary Valuation
Results as of July 1, 2021*



Notes

- 1) Market values include receivable contributions.
- 2) Market values exclude receivable withdrawal liability payments.

2021 Survey of Capital Market Assumptions

2021 Survey: Overview

- **Capital market assumptions:**
 - Expected returns by asset class
 - Standard deviations by asset class
 - Correlation coefficient matrix
- **39 survey participants**
 - There were also 39 advisors in the 2020 survey
 - One 2020 advisor did not participate in 2021
 - One new advisor for 2021
- **Short-term vs. long-term:**
 - “Short-term” considered to be 10 years or less
 - “Long-term” considered to be 20 years or more
 - All 39 respondents provided short-term assumptions
 - 24 respondents also provided long-term assumptions

2021 Survey Participants	
<i>AJ Gallagher</i>	<i>Meketa Investment Group</i>
<i>Alan Biller</i>	<i>Mercer</i>
<i>AndCo Consulting</i>	<i>Merrill</i>
<i>Aon</i>	<i>Milliman</i>
<i>The Atlanta Consulting Group</i>	<i>Morgan Stanley Wealth Management</i>
<i>Bank of New York Mellon*</i>	<i>NEPC</i>
<i>BlackRock*</i>	<i>PFM Asset Management, LLC</i>
<i>Callan Associates</i>	<i>Research Affiliates, LLC*</i>
<i>Cambridge Associates</i>	<i>Royal Bank of Canada</i>
<i>CapTrust</i>	<i>RVK</i>
<i>Ellwood Associates</i>	<i>Segal Marco Advisors</i>
<i>Envestnet</i>	<i>SEI</i>
<i>Goldman Sachs Asset Management</i>	<i>Sellwood Consulting</i>
<i>Graystone Consulting</i>	<i>SunTrust</i>
<i>Invesco*</i>	<i>UBS</i>
<i>Investment Performance Services, LLC (IPS)</i>	<i>The Vanguard Group</i>
<i>Janney Montgomery Scott, LLC</i>	<i>Verus</i>
<i>J.P. Morgan Asset Management*</i>	<i>Voya Investment Management*</i>
<i>Marquette Associates</i>	<i>Willis Towers Watson</i>
	<i>Wilshire</i>

**Assumptions obtained from published white paper.*

The full report can be found at www.horizonactuarial.com.

2021 Survey: Evaluating the Return Assumption

Industry & Local 338

2021 Survey of Capital Market Assumptions

Asset Class	Portfolio Weight	Average Survey Assumptions		
		10-Year Horizon	20-Year Horizon	Standard Deviation
US Equity - Large Cap	25.0%	5.78%	6.65%	16.42%
US Equity - Small/Mid Cap	3.0%	6.27%	7.04%	20.17%
Non-US Equity - Developed	22.0%	6.38%	7.14%	18.32%
Non-US Equity - Emerging	3.0%	7.24%	7.81%	24.33%
US Corporate Bonds - Core	14.5%	2.09%	3.23%	5.52%
US Corporate Bonds - Long Duration	7.0%	2.18%	3.43%	10.39%
US Corporate Bonds - High Yield	4.0%	3.78%	4.98%	9.88%
Non-US Debt - Developed		1.40%	2.25%	7.18%
Non-US Debt - Emerging	4.0%	4.24%	5.32%	11.26%
US Treasuries (Cash Equivalents)		1.15%	1.90%	1.30%
TIPS (Inflation-Protected)		1.60%	2.38%	5.64%
Real Estate	7.0%	5.50%	6.21%	17.62%
Hedge Funds		4.46%	5.33%	8.09%
Commodities		3.06%	3.96%	17.31%
Infrastructure		6.20%	6.79%	17.04%
Private Equity	10.5%	8.82%	9.65%	22.25%
Private Debt		6.45%	6.87%	11.42%
Inflation	N/A	2.12%	2.23%	2.05%
TOTAL PORTFOLIO	100.0%	<i>Expected returns are geometric.</i>		

Considerations and Limitations

- Allocations may be approximated if certain asset classes are not included in the survey.
- Many investment advisors provided only shorter-term assumptions (10 years or less).
- Assumptions are generally based on indexed returns and do not reflect anticipated alpha.
- Assumptions do not reflect investment opportunities or fee considerations available to larger funds.

SOURCE: Horizon Actuarial 2021 Survey of Capital Market Assumptions

Expected returns over a 10-year horizon include all 39 survey participants.

Expected returns over a 20-year horizon are based a subset of 24 survey participants who provided long-term assumptions.

Expected Returns

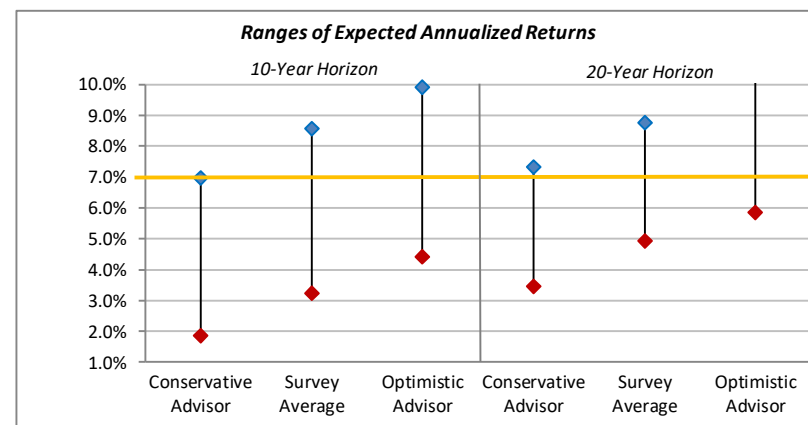
	10-Year Horizon			20-Year Horizon		
	Conservative Advisor	Survey Average	Optimistic Advisor	Conservative Advisor	Survey Average	Optimistic Advisor
Average Annual Return (Arithmetic)	5.10%	6.62%	7.91%	6.16%	7.57%	9.29%
Annualized Return (Geometric)	4.41%	5.88%	7.15%	5.39%	6.82%	8.18%
Annual Volatility (Standard Deviation)	12.00%	12.50%	12.84%	12.78%	12.67%	15.51%

Range of Expected Annualized Returns

75th Percentile	6.97%	8.55%	9.89%	7.31%	8.73%	10.52%
25th Percentile	1.85%	3.22%	4.41%	3.46%	4.91%	5.85%

Probabilities of Exceeding Certain Returns

7.50% per Year, Annualized	20.8%	34.1%	46.5%	23.0%	40.5%	57.8%
7.25% per Year, Annualized	22.7%	36.5%	49.0%	25.7%	43.9%	60.6%
7.00% per Year, Annualized	24.7%	38.9%	51.4%	28.6%	47.4%	63.4%

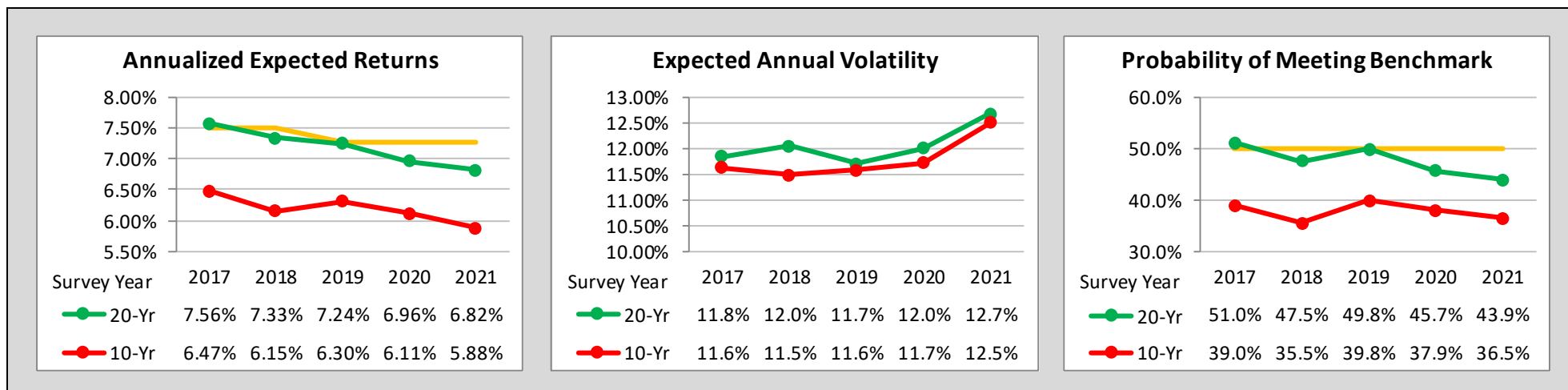


The exhibit above evaluates the investment return assumption for the portfolio shown above (highlighted in yellow). Note that the most conservative and optimistic advisors for the 10-year horizon are not necessarily the same as the most conservative and optimistic advisors for the 20-year horizon.

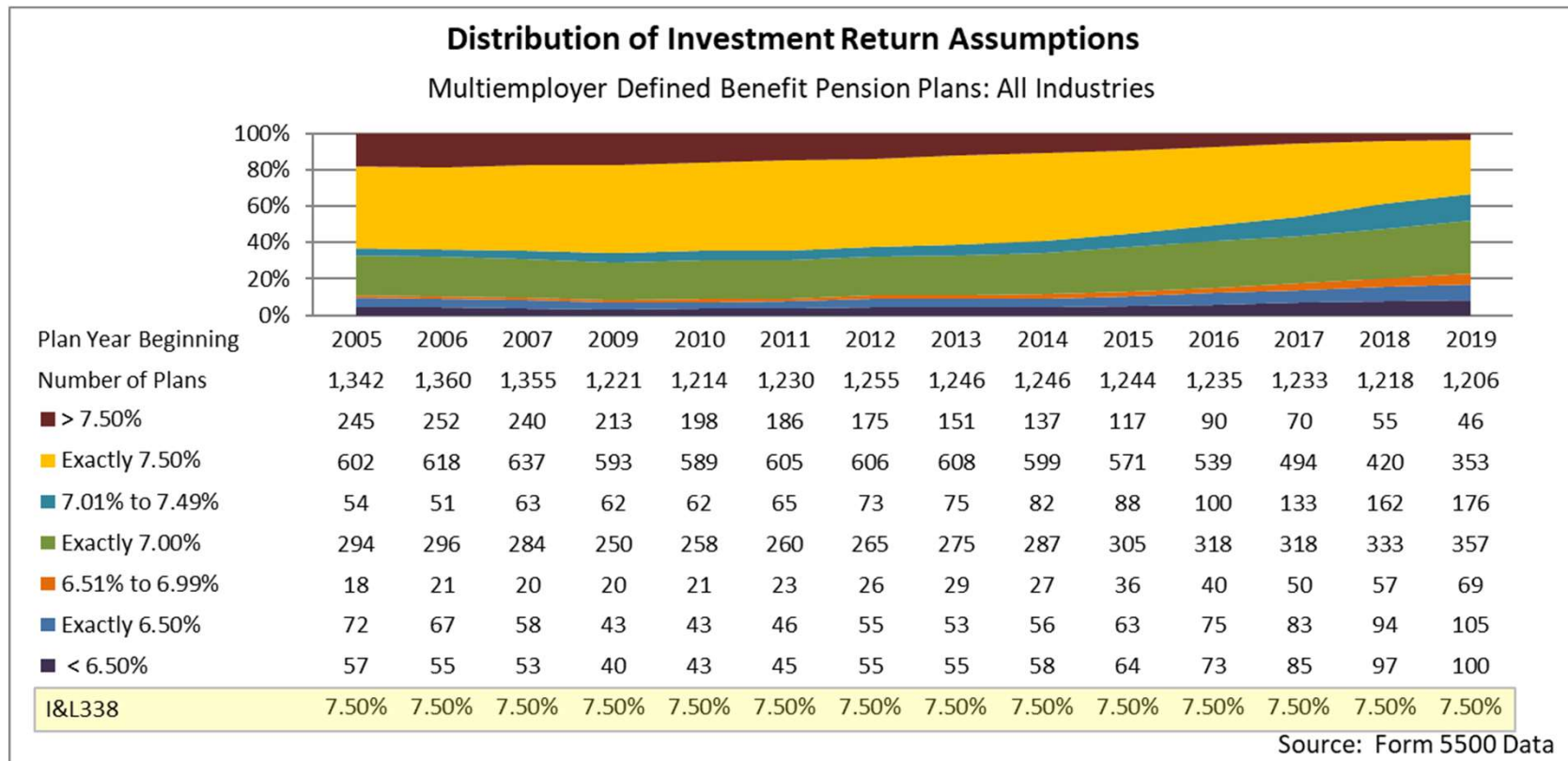
The Plan's asset allocation was determined based on information provided by SEI

Changes in Expected Returns

- **Average assumptions change each year**
 - Mostly driven by changing return expectations
 - Changes in survey participants is also a factor
- **Focus on sustained trends**
 - It is generally not appropriate to change the investment return assumption each year
 - More appropriate to consider sustained trends when evaluating and updating assumption
- **The following graphs show the survey average results for the past five years**
 - Changes in individual plan results shown below may also be driven by changes in asset allocation



Changes in Return Assumptions



- Exhibit shows distribution of investment return assumptions, plan year by plan year.
- In general, investment return assumptions have decreased slightly from 2005 to 2019.

Pension Risks: Investment Return Assumption

- **Lower investment return assumption = higher actuarial liability**
- **Impact of reduction in investment return on plan funding:**
 - Plan liabilities: immediate increase in actuarial accrued liability
 - Plan assets: no change in asset value
 - Funded percentage: immediate decrease funded percentage
 - Unfunded liability: immediate increase in unfunded liability
 - Credit balance: increase in unfunded liability is amortized (paid for) over a 15-year period in the funding standard account (credit balance)
- **Determination of unfunded vested benefits for withdrawal liability purposes also involves an assumption for investment return**

July 1, 2021 Actuarial Valuation: Preliminary Results

Purpose of the Valuation

- **Determine**

- Whether negotiated contributions adequately fund benefits
- The minimum required and maximum deductible contributions for the plan year
- The unfunded vested liability for computation of withdrawal liability
- The contribution margin for the plan year
- The benefit liabilities for the next status certification under PPA
- The benefit liabilities and assets are the basis of any benefit or contribution study

- **Review & Establish**

- Actuarial assumptions in view of recent experience

Summary of Preliminary Valuation Results

■ Active Experience

- Number of actives increased from 204 as of July 1, 2020 to 207 as of July 1, 2021.
- Participants classified as active for the July 1, 2021 valuation worked 9,876 total weeks in the plan year ending June 30, 2021.

■ Market Value of Assets

- At \$21.9 million, the net investment return for the plan year ending June 30, 2021 was 25.04% (17.79% greater than the 7.25% assumed return).
- This resulted in a market value gain from investments of approximately \$15.6 million, relative to the 7.25% assumption.

■ Liability Loss

- Approximately \$430,000 or about 0.40% of total plan liabilities.
- We will continue to monitor the assumptions to make sure they are reasonable both in the aggregate and on an individual basis.

Issues Impacting Current Valuation Results

- **Plan Changes**

- None

- **Assumption Changes**

- Results at 7.00% interest rate are shown for comparison to 7.25%

- **Method Change**

- None

Issues Impacting Current Valuation Results

■ Contribution Income

- Expected \$3.2 million in contributions, financial statements show \$3.25 million received (excluding withdrawal liability payments)
- Total weeks worked equaled 10,228 during the plan year ending June 30, 2021 (compared to 10,000 assumed)
 - 9,876 weeks for participants classified as active for the July 1, 2021 valuation
 - 352 weeks for other participants
- The average contribution rate for the Plan increased to roughly \$316/week for the plan year ending June 30, 2021. The average contribution rate was roughly \$303/week for the plan year ending June 30, 2020.
 - The plan remains sensitive to population changes amongst employers

Participant Reconciliation

*Preliminary Valuation
Results as of July 1, 2021*

Reconciliation of Participants by Status						
	Active	Inactive Vested	Non-Disabled Retirees	Disabled Retirees	Beneficiaries	Total
A. Count as of July 1, 2020	204	276	505	21	120	1,126
B. Status Changes During Plan Year						
1. Nonvested Terminations	(9)					(9)
2. Vested Terminations	(6)	6				0
3. Retirement	(2)	(9)	11			0
4. Disabled						0
5. Deceased			(26)	(1)	(8)	(35)
6. Certain Period Ended						0
7. Lump Sum						0
8. Rehires	7	(1)				6
9. New Entrants	13					13
10. New Beneficiaries					11	11
11. Net Adjustments			1			1
Net Increase (Decrease)	3	(4)	(14)	(1)	3	(13)
C. Count as of July 1, 2021	207	272	491	20	123	1,113

Notes

1) Counts exclude 10 Alternate Payees as July 1, 2021 and 9 Alternate Payees as of July 1, 2020.

Age & Service Distribution

*Preliminary Valuation
Results as of July 1, 2021*

Age & Service Distribution for Active Participants											
Age	Years of Service										Total
	Under 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	
Under 25	-	10	1	-	-	-	-	-	-	-	11
25 - 29	-	15	1	-	-	-	-	-	-	-	16
30 - 34	-	11	3	4	-	-	-	-	-	-	18
35 - 39	-	11	6	6	6	-	-	-	-	-	29
40 - 44	-	7	2	3	9	2	-	-	-	-	23
45 - 49	-	6	5	4	5	5	1	-	-	-	26
50 - 54	-	5	6	2	4	6	-	2	-	-	25
55 - 59	-	5	3	6	5	5	2	1	-	-	27
60 - 64	-	2	6	2	4	4	1	4	1	1	25
65 - 69	-	1	-	1	1	1	-	1	-	1	6
70 +	-	-	1	-	-	-	-	-	-	-	1
Total	-	73	34	28	34	23	4	8	1	2	207

Notes

- 1) Participants with less than one year of service are excluded for valuation purposes.

Participant Demographic Summary

*Preliminary Valuation
Results as of July 1, 2021*

Measurement Date	July 1, 2021	July 1, 2020
A. Active Participants		
1. Count	207	204
2. Average Age	45.7	45.5
3. Average Credited Service	11.4	11.4
4. Average Prior Year Weeks	47.7	48.0
5. Average Monthly Accrued Benefit	\$ 1,401	\$ 1,367
B. Inactive Vested Participants		
1. Count	272	276
2. Average Age	52.8	52.4
5. Average Monthly Accrued Benefit	\$ 1,117	\$ 1,095
C. Retired Participants and Beneficiaries		
1. Count	634	646
2. Average Age	74.8	74.6
3. Average Monthly Benefit	\$ 1,051	\$ 1,040

Notes

1) Retiree and Beneficiary counts above exclude Alternate Payees awarded plan benefits under a QDRO.

Summary of Key Results

**Preliminary Valuation
Results as of July 1, 2021**

Measurement Date	July 1, 2021	July 1, 2021	July 1, 2020
Interest Rate	7.00%	7.25%	7.25%
A. Normal Cost			
1. Cost of Benefit Accruals	\$ 1,003,763	\$ 961,434	\$ 932,552
2. Assumed Operating Expenses	362,319	361,882	361,882
3. Total	\$ 1,365,645	\$ 1,323,316	\$ 1,294,434
B. Actuarial Accrued Liability			
1. Active Participants	\$ 15,099,073	\$ 14,585,173	\$ 13,415,676
2. Inactive Vested Participants	16,752,146	16,143,838	15,385,041
3. Retired Participants and Beneficiaries	77,423,670	75,962,758	77,279,894
4. Total	\$ 109,274,889	\$ 106,691,769	\$ 106,080,611
C. Assets			
1. Market Value of Assets	\$ 106,926,830	\$ 106,926,830	\$ 90,149,205
Prior Year Net Investment Return	25.0%	25.0%	1.8%
2. Actuarial Value of Assets	\$ 98,282,042	\$ 98,282,042	\$ 94,455,196
Prior Year Net Investment Return	9.8%	9.8%	4.8%
D. Funded Percentages			
1. Market Value Funded Percentage (C.1. / B.4.)	97.8%	100.2%	84.9%
2. Actuarial Value Funded Percentage (C.2. / B.4.)	89.9%	92.1%	89.0%

Contribution Margin

**Preliminary Valuation
Results as of July 1, 2021**

Measurement Date	July 1, 2021	July 1, 2021	July 1, 2020
Interest Rate	7.00%	7.25%	7.25%
A. Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability	\$ 109,274,889	\$ 106,691,769	\$ 106,080,611
2. Actuarial Value of Assets	<u>98,282,042</u>	<u>98,282,042</u>	<u>94,455,196</u>
3. Unfunded Liability	\$ 10,992,847	\$ 8,409,727	\$ 11,625,415
B. Actuarial Cost			
1. Normal Cost			
a. Cost of Benefit Accruals	\$ 1,038,895	\$ 996,286	\$ 966,357
b. Assumed Operating Expenses	<u>375,000</u>	<u>375,000</u>	<u>375,000</u>
c. Total	\$ 1,413,895	\$ 1,371,286	\$ 1,341,357
2. Unfunded Liability Amortization Payment	<u>1,513,938</u>	<u>1,170,291</u>	<u>1,617,784</u>
3. Total Actuarial Cost for Plan Year	\$ 2,927,833	\$ 2,541,577	\$ 2,959,141
C. Expected Employer Contributions			
1. Expected Weeks	10,100	10,100	10,000
2. Average Contribution Rate per Week	<u>\$ 319.32</u>	<u>\$ 319.32</u>	<u>\$ 315.57</u>
3. Expected Contributions	\$ 3,225,149	\$ 3,225,149	\$ 3,155,682
D. Contribution Margin			
1. Contribution Margin for Plan Year	\$ 297,316	\$ 683,572	\$ 196,541
2. Contribution Margin per Week	\$ 29.44	\$ 67.68	\$ 19.65

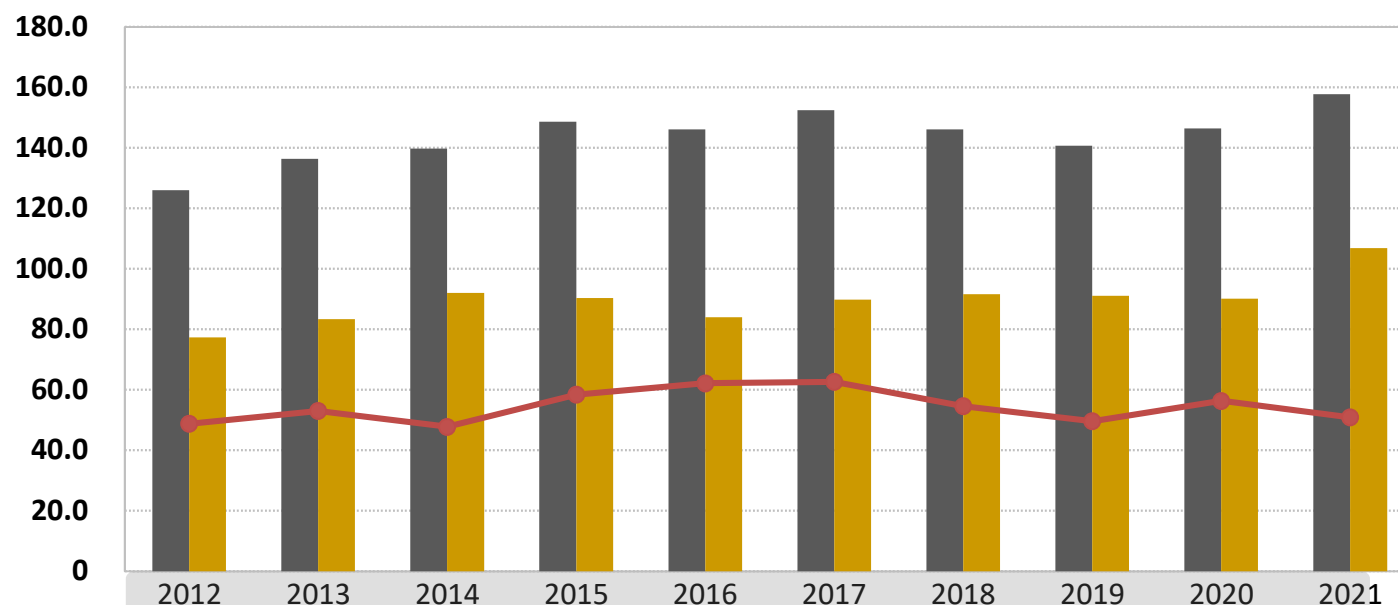
Notes

1) The actuarial costs in B. above include an include interest adjustments to reflect payments throughout the year.

Withdrawal Liability

**Preliminary Valuation
Results as of July 1, 2021**

Industry & Local 338 Pension Plan
Withdrawal Liability at Plan Year Ending 6/30 (\$ Millions)



■ Vested Benefits	126.0	136.4	139.8	148.7	146.2	152.5	146.2	140.7	146.5	157.8
■ Market Value of Assets	77.3	83.4	92.1	90.3	84.1	89.8	91.6	91.2	90.1	106.9
● Unfunded Vested Benefits	48.7	53.0	47.7	58.4	62.1	62.6	54.6	49.6	56.3	50.9

Notes

- 1) The value of vested benefits is determined using a blend of the valuation interest rate and PBGC termination rates
- 2) Vested Benefits as of 6/30/2018 reflects reductions in adjustable benefits required by the Rehabilitation Plan that must be disregarded for withdrawal liability purposes. The value of adjustable benefits is \$11.5 million as of 6/30/2021.

Funding Projections

Projection Assumptions and Methods

- **Unless otherwise stated, the projection assumptions, methods, data and plan provisions used are the same as those used for the Preliminary July 1, 2021 actuarial valuation.**
 - No future expected gains or losses other than those attributable to investment returns, as applicable.
- **Investment Earnings**
 - 25.04% return on assets for the plan year ending June 30, 2021
 - 7.25% per year, net of investment-related expenses, thereafter unless otherwise noted
- **Operating Expenses**
 - \$375,000 for the plan year beginning July 1, 2021, increasing 2.5% per year

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

Projection Assumptions and Methods (cont.)

- **Work Levels**

- Plan year beginning July 1, 2021 – 10,100 total weeks

- **Contribution Rates**

- Included in Collective Bargaining Agreements as bargained
 - The Plan's Funding Policy was revoked during the July 22, 2021 Board Meeting
 - All contributions rate increases are benefit-bearing

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

Projection Assumptions and Methods (cont.)

■ Contracts

- 55% of hours worked under contracts beginning that are expected to renew in PYB 2020
 - HP Hood, draft renewal with expiration October 31, 2023
 - Draft CBA includes increases September 1, 2021, November 1, 2021 and November 1, 2022
 - Montefiore New Rochelle, expired November 5, 2020
 - Paraco, renewed February 1, 2021, expires January 31, 2024
- 31% of hours worked under contracts that are expected to renew in PYB 2021
 - FrieslandCampina, expired December 31, 2021
- 13% of hours worked under contracts beginning that are expected to renew in PYB 2022
 - LP Transport, expires August 15, 2022

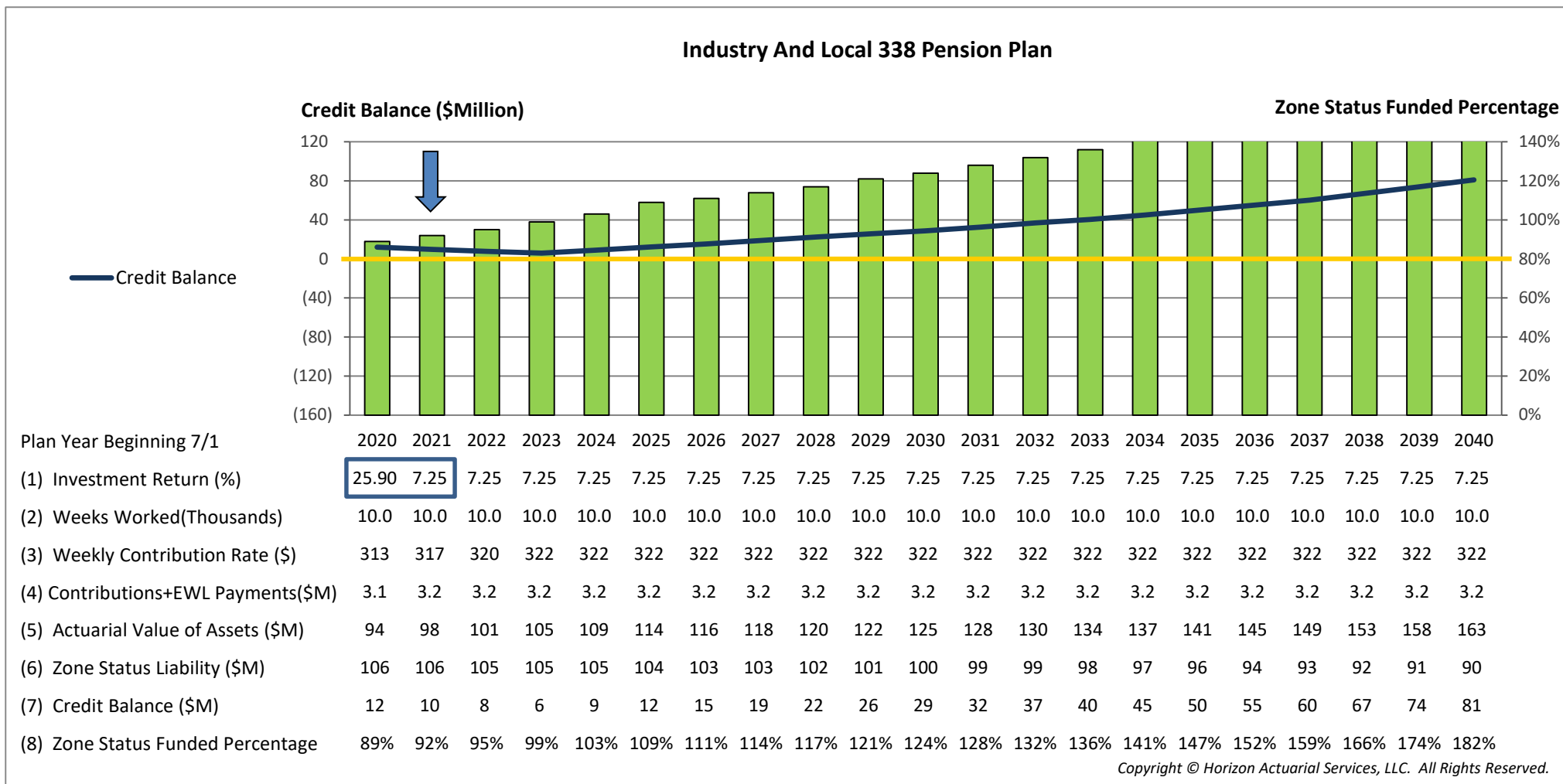
Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

Projection Roadmap

Scenario	Valuation Discount Rate 2021+	Investment Return PYB 2020 / PYB 2021+	Weeks Worked PYB 2021+	Zone Status 2040-2041	FSA Balance 6/30/2041	% Funded 7/1/2040	Weekly Contrib Rate 7/1/2040
Certification Basis: Contribution Rates Included in Current Collective Bargaining Agreements							
1 July 1, 2021 Certification	7.25%	25.9% / 7.25%	10,000	Green	\$84M	183%	\$322
2 July 1, 2021 Valuation	7.25%	25.0% / 7.25%	10,000	Green	\$83M	181%	\$322
3 Low ROA PYE 2022	7.25%	25.0% 2021 0.00% 2022 7.25% thereafter	10,000	Green	\$55M	151%	\$322
4 Alternative Discount Rate	7.00%	25.0% / 7.00%	10,000	Green	\$69M	165%	\$322
5 Alternative Discount Rate and Low ROA	7.00%	25.0% 2021 0.00% 2022 7.00% thereafter	10,000	Green	\$43M	138%	\$322

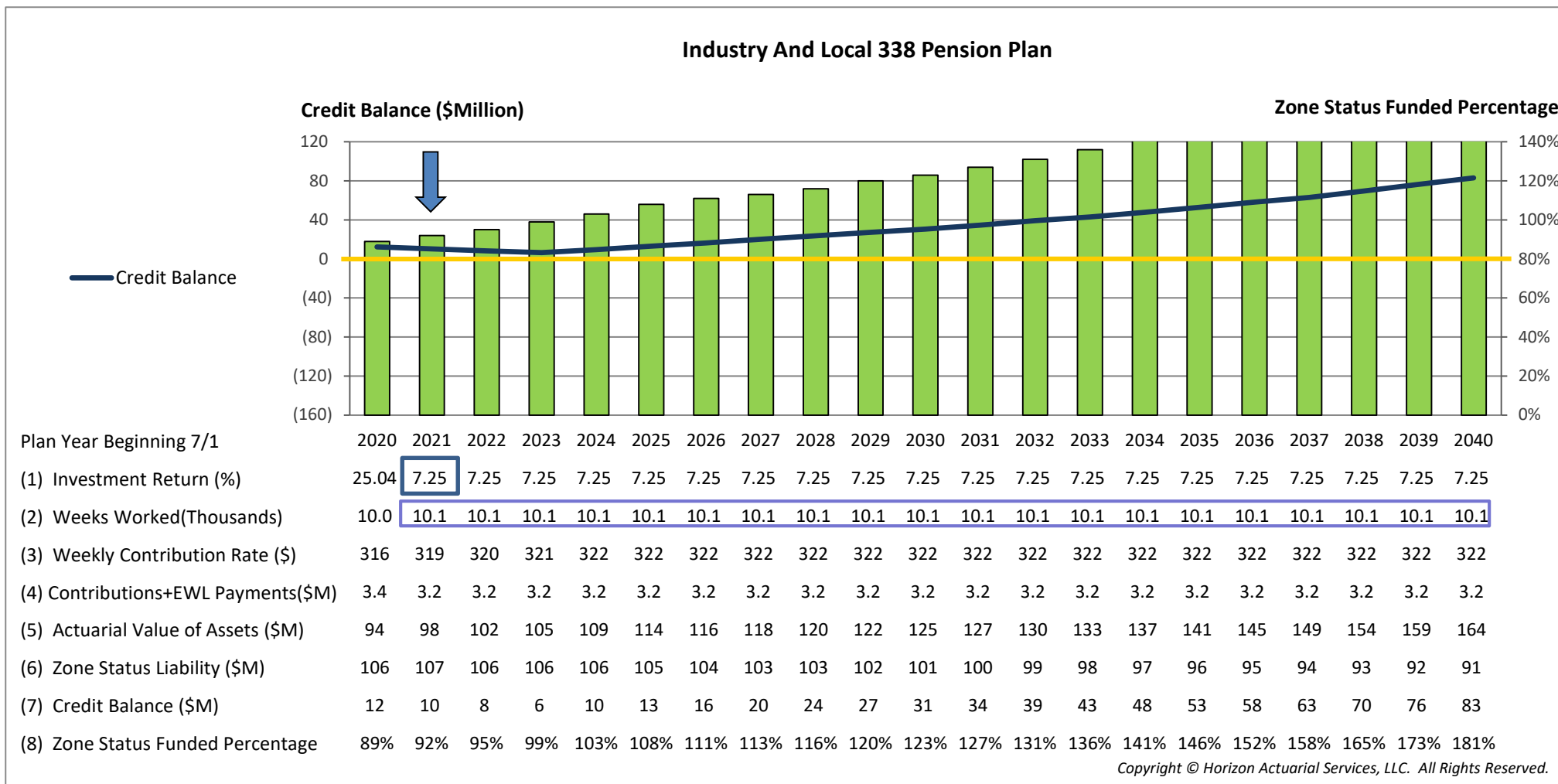
Scenario 1: 2021 PPA Certification

25.9% Return PYB 2020; 7.25% Return PYB 2021+ | 10.0 Thousand Weeks Worked beginning PYB 2021



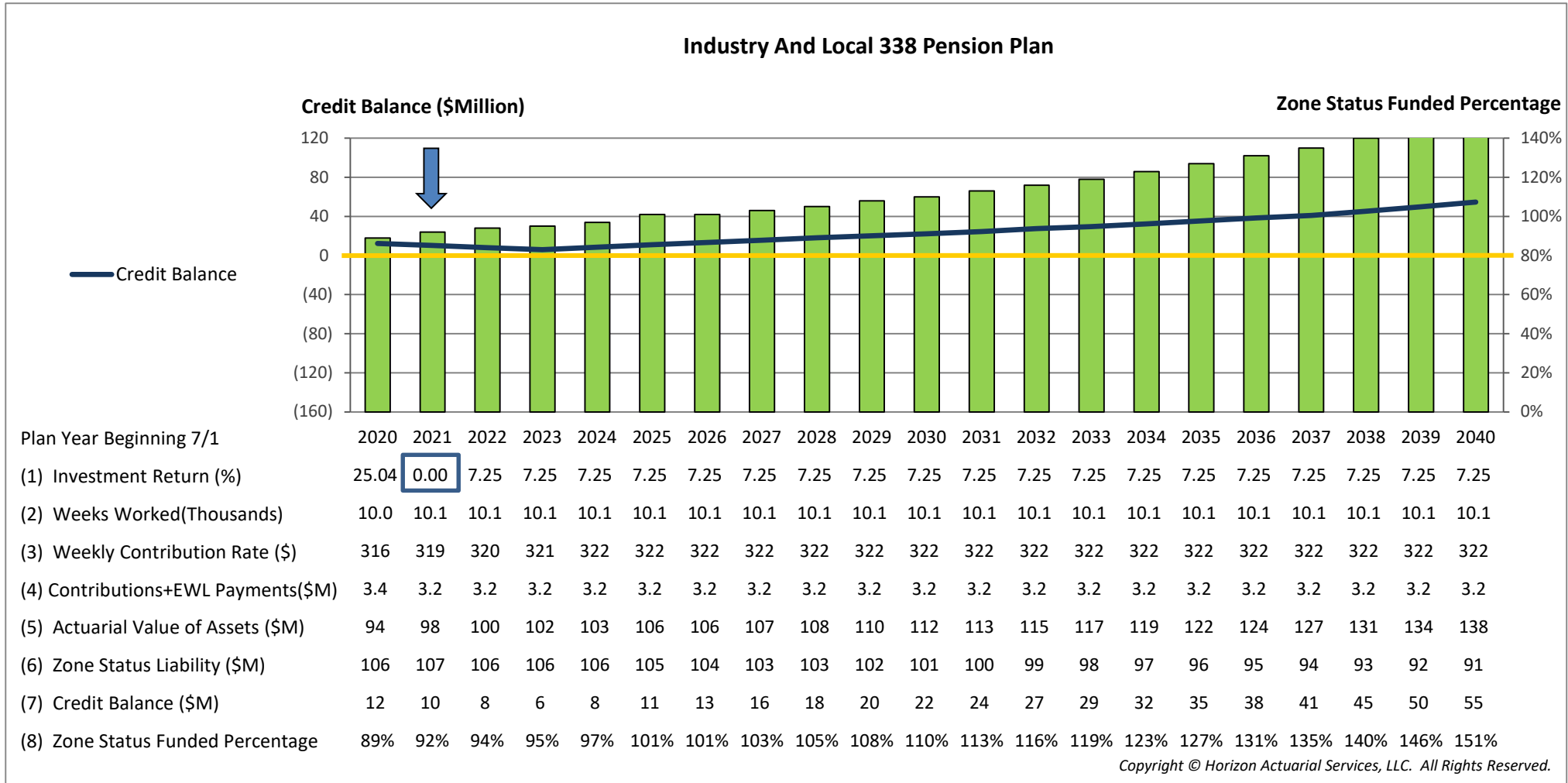
Scenario 2: 2021 Valuation

7.25% Return PYB 2021+ | 10.1 Thousand Weeks Worked beginning PYB 2021



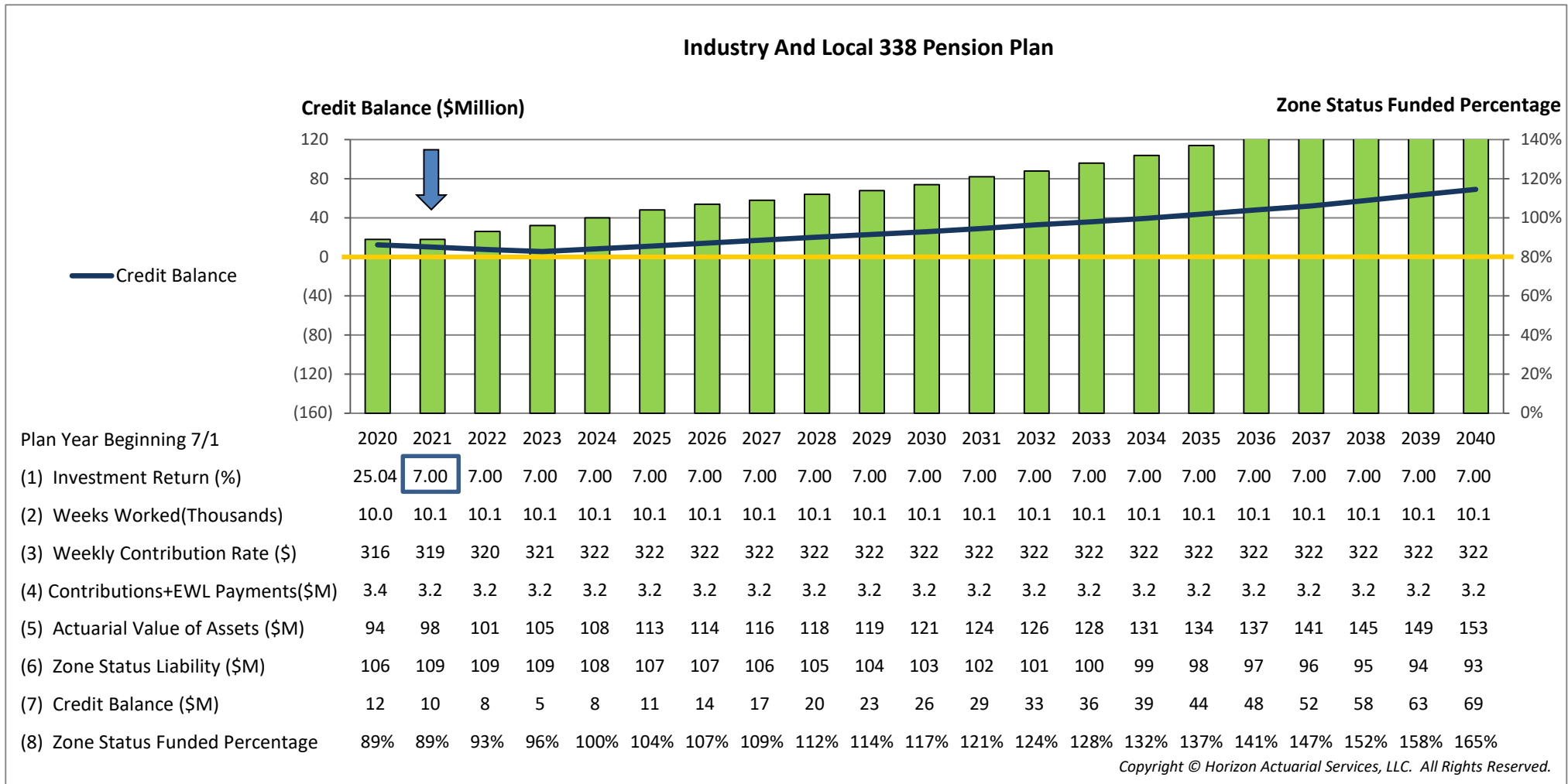
Scenario 3: One-Year Low Return

0.00% Return PYB 2021; 7.25% Return PYB 2022+ | 10.1 Thousand Weeks Worked beginning PYB 2021



Scenario 4: Alternative Discount Rate

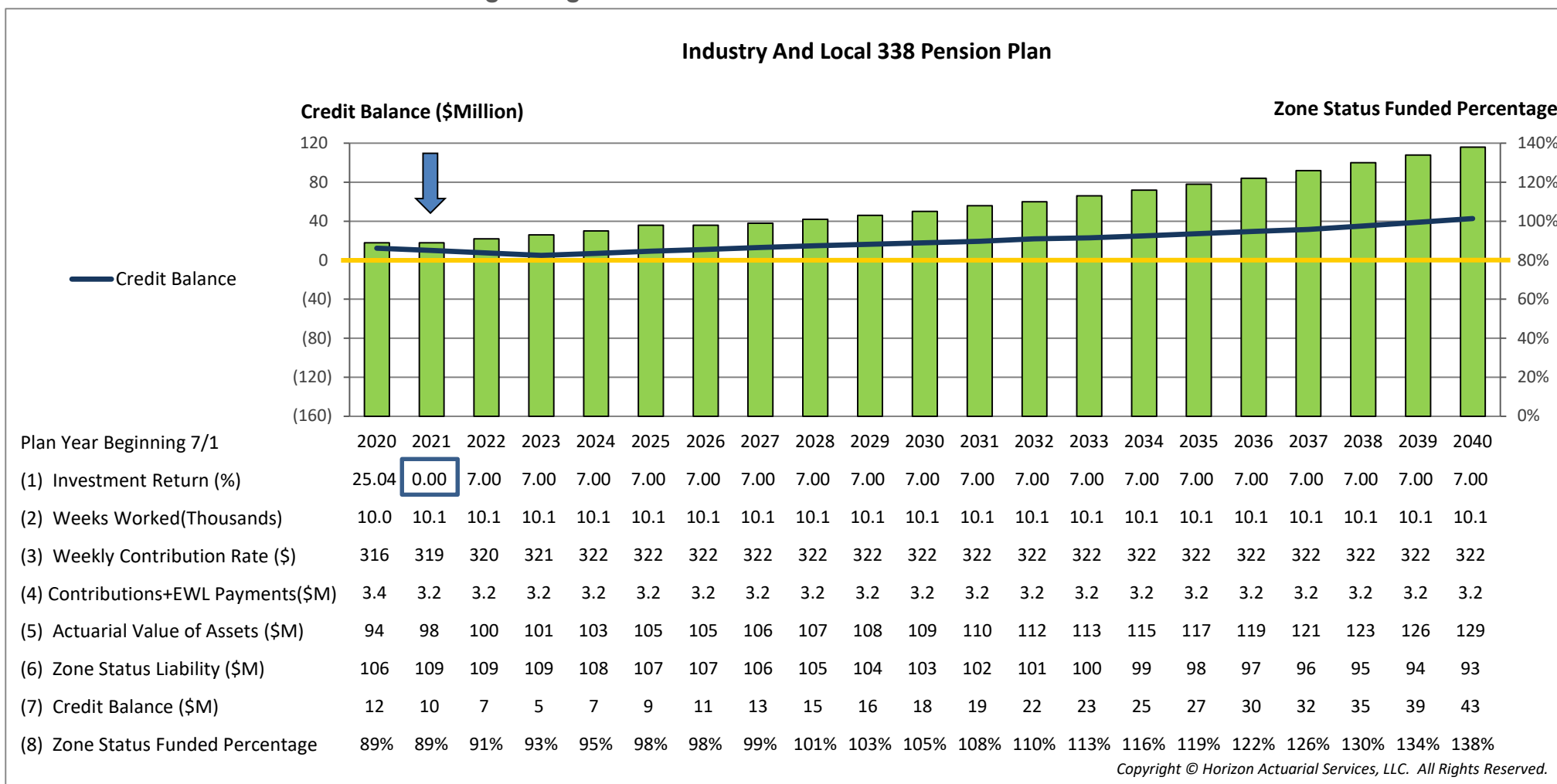
7.00% Discount Rate | 7.00% Return PYB 2021+ | 10.1 Thousand Weeks Worked beginning PYB 2021



Scenario 5: Alternative Discount Rate and Low ROA

7.00% Discount Rate | 0.00% Return PYB 2021; 7.00% Return PYB 2022+ |

10.1 Thousand Weeks Worked beginning PYB 2021



Forecast Observations

- **The Plan remains sensitive to both investment return and contributions**
 - The investment return for plan year ended June 30, 2021 has added to the funding cushion.
 - Future investment returns and contribution levels (hours worked) will impact the projected funding of the Plan.
- **Long term funding improvement is compromised if investment returns are less than assumed or contribution levels fall**
 - Even with a better than expected return for the current year the plan remains sensitive to investment returns
 - Investment professionals are generally reporting lower expectations for investment returns, particularly in the short term
 - We continue to monitor movements in the outlook for future investment returns reported by investment professionals
- **Managing the Credit Balance**
 - The plan currently has a credit balance which is more sensitive in the short term to experience gains and losses than in the long term

Appendix

Contribution Rate Summary

Employer	Contract Expiration Date	As of 7/1/2019		As of 7/1/2020		As of 7/1/2021	
		Active Count (Valn Data)	Total Wkly Contrib Rate	Active Count (Valn Data)	Total Wkly Contrib Rate	Active Count (Valn Data)	Total Wkly Contrib Rate
College of New Rochelle	8/31/2013	17	\$ 269.04	0	\$ 269.04	0	\$ 269.04
HP Hood / Crowley	10/31/2020	91	322.98	91	342.58	94	342.58
Culinart	12/31/2016	0	267.15	0	267.15	0	267.15
Freisland Campina	12/31/2021	65	242.64	62	261.33	65	281.24
LP Transport	8/15/2019	32	322.75	29	331.51	27	340.53
Montefiore New Rochelle	11/5/2020	13	270.30	13	290.21	13	290.21
Paraco Gas	1/31/2021	7	263.84	8	283.75	7	292.51
Westchester L860	9/30/2013	1	243.28	1	243.28	1	243.28
Total		226		204		207	

Notes

- 1) All contributions are benefit-bearing, effective beginning July 1, 2016.
- 2) Contribution rates shown above are as reported by Plan Administrator.
- 3) Contribution rates as of 7/1/2019 include surcharges for College of New Rochelle, Culinart, Friesland Campina, Westchester L 860

Historical Contribution Rates by Contract

Employer	Base Rate	As of Plan Year Ending									
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
College of New Rochelle	\$ 110.44	\$ 158.00	\$ 174.00	\$ 174.00	\$ 174.00	\$ 174.00	\$ 174.00	\$ 208.95	\$ 269.04	N/A	N/A
HP Hood / Crowley	130.00	186.34	204.97	225.47	248.00	272.79	286.43	303.98	322.67	342.58	342.58
Culinart	108.44	154.98	170.48	187.53	206.28	226.91	226.91	267.15	267.15	N/A	N/A
Friesland Campina	100.12	146.57	161.23	177.35	195.09	205.09	215.09	247.60	242.64	261.33	281.24
LP Transport	160.00	192.00	208.00	228.80	251.60	276.80	290.80	322.75	322.75	331.51	340.53
Montefiore New Rochelle	120.12	175.85	193.44	212.78	234.06	234.06	234.06	251.61	270.30	290.21	290.21
Paraco Gas	124.00	156.00	172.00	188.00	206.80	227.60	227.60	245.15	263.84	283.75	292.51
Westchester L860	130.15	186.55	205.21	205.21	205.21	205.21	205.21	243.28	243.28	243.28	243.28

Notes

- 1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing.
- 2) Contribution rates for 2018 include surcharges for College of New Rochelle, Culinart, Friesland Campina, Westchester L 860

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
Interest Rate	7.25% per annum
Plan Year	The twelve-month period beginning July 1 and ending June 30.
Mortality	Non-Disabled: Non-annuitant: 125% of the sex-distinct RP-2014 Blue Collar Employee Mortality Table Annuitant: 125% of the sex-distinct RP-2014 Blue Collar Annuitant Mortality Table Disabled: 125% of the sex-distinct RP-2014 Disabled Mortality Tables All mortality tables are adjusted to future years using generational projection under Scale MP-2014 to anticipate future mortality improvement.
Active Participant	Active participants are defined as those with at least two months of employment in the most recent plan year and who have accumulated at least one pension credit, excluding those who have retired as of the valuation date and those who work for an employer that has withdrawn from the Plan on or before the valuation date.
Exclusion of Inactive Vested Participants	Inactive participants over age 70 are excluded from the valuation.
Operating Expenses	Operating expenses were assumed to be \$375,000 for the plan year beginning July 1, 2021 (equivalent to \$361,882 payable at the beginning of the year).

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method		
Retirement Rates	Age (if eligible for retirement)	Retirement Rate	
	55-59	10%	
	60-61	20%	
	62	75%	
	63-65	50%	
	66-69	25%	
	70	100%	
Inactive Vested Commencement	Retirement is assumed to occur at age 65 for participants with fewer than 15 pension credits, and at the later of current age or age 55 for participants with at least 15 pension credits.		
Sample Rates (before Retirement)	Age	Disability Rate (%)	Withdrawal Rate (%) (until earliest eligibility for a pension)
	20	0.05	6.58
	25	0.05	5.27
	30	0.05	4.83
	35	0.06	4.47
	40	0.09	3.84
	45	0.18	3.21
	50	0.40	1.52
	55	0.85	0.33
	60	1.74	0.00

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
<i>Weeks (Hours) Worked</i>	Average of weeks worked in the preceding plan year. For the plan year beginning July 1, 2021 each active participant is assumed to work 49 weeks (1,960 hours) per year. For the plan year beginning July 1, 2020 the assumption was 49 weeks (1,960 hours) per active participant per year.
<i>Future Benefit Accruals</i>	One pension credit per plan year.
<i>Contribution Income</i>	For the purpose of projecting future contribution income, it is assumed contributions are earned based on the assumed number of weeks worked for participants multiplied by the expected contribution rate. Participants are assumed to continue to work for the employer reported in the data and at the rate required by that employer's contract.
<i>Asset Method</i>	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the projected market return, and is recognized over a five-year period. The actuarial value is further adjusted, if necessary, to be within 20% of the market value.
<i>Actuarial Cost Method</i>	Unit Credit Cost Method.

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
Form of payment	Unmarried participants are assumed to elect a Life Annuity. Married participants are assumed to elect a reduced 75% Joint and Survivor Annuity.
Marriage	75% of participants are assumed married.
Spouse Age	Female spouses are assumed to be three years younger than their male spouses, if actual age is unknown.
Missing or Incomplete Participant Data	Assumed to be the same as those exhibited by participants with similar known characteristics. For those with unknown gender, gender was assumed to be male.
Unfunded Vested Benefits for Employer Withdrawals	Interest: - For liabilities up to the market value of assets, liabilities are valued using interest rates used by PBGC for plan terminations. For the July 1, 2021 valuation these are 1.82% and 1.68% (for 20 years and thereafter, respectively). Operating expenses as prescribed by PBGC formula (29CFR Part 4044, Appendix C) are included for liabilities determined using PBGC termination interest rates. - For liabilities in excess of the market value of assets, valued using 7.25% All other assumptions are the same as those used for the funding valuation.

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
ARPA Election	The Trustees elected to apply the following special funding rules under the American Rescue Plan Act of 2021, effective with the plan year beginning July 1, 2020: • <u>Special amortization rule</u>: As permitted under Section 431(b)(8)(A) of the Internal Revenue Code, eligible net investment losses incurred in the plan year ending June 30, 2020 are amortized in the funding standard account over the 29 years beginning July 1, 2020. The special rules apply retroactively to the plan year beginning July 1, 2019. For purposes of determining the amounts of the eligible net investment losses to be recognized in the funding standard account under the special amortization rule, the “prospective” method described in IRS Notice 2010-83 was used.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Plan Year	The twelve-month period beginning July 1 and ending June 30.
Participants	An Employee becomes a participant in the Plan on January 1 or July 1 after completing four months of covered employment in any consecutive 12-month period.
Normal Form of Payment	For unmarried participants, a Life Annuity. For married participants, actuarially reduced 75% Joint and Survivor Annuity.
Cost of Living Increases	None.
Benefit Service	$\frac{1}{4}$ Pension Credit for each two months of covered employment, with a maximum of one pension credit after eight months. The maximum total pension credits for benefit purposes is 35.
Vesting Service	One year of vesting service for four months of covered employment.
Break-in-Service	A break in service occurs in any plan year in which the participant fails to complete at least two months of work. In determining whether a break in service has been incurred, work in non-covered employment that is credited as vesting service will be considered covered employment.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Regular Pension	<u>Eligibility:</u> An Employee is eligible for a Regular Pension if the Employee has attained age 65 and has earned 15 pension credits. <u>Amount of Benefit:</u> Upon retirement on his Regular Retirement Date, a Participant will be entitled to receive a monthly benefit equal to: • For pension credits on or after July 1, 2016, monthly benefit accruals are equal to 0.9% of total contributions made for the participant's work. • For pension credit earned on or after July 1, 2010 and before July 1, 2016, \$37.00 for each \$1.00 of hourly (benefit-bearing) employer contribution rate. • For pension credits earned on or after July 1, 1997 and before July 1, 2010, the accrual rate is \$49.00 for each \$1.00 of hourly employer contribution rate. • For pension credits prior to July 1, 1997, the accrued benefit based on prior plan formula increased by 20.75%. • A maximum of 35 pension credits applies.
Vested Benefit	<u>Eligibility:</u> Five or more years of vesting service. <u>Amount of Benefit:</u> Regular Pension Payable at Normal Retirement Age.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Contribution Rates	For the period beginning September 28, 2006 and ending June 30, 2016, in the event a contributing employer is obligated to make a special Supplemental Contribution to the Fund solely for the purpose of improving the funding status of the Plan, such Supplemental Contributions shall not be included in the calculation of a Participant's pension benefit. Effective July 1, 2016, all contributions are benefit-bearing under the newly adopted benefit formula (0.9% x Total Contributions). For the plan year ended June 30, 2021, total contribution rates range from \$243.28 to \$342.58 per week.
Service Pension	<u>Eligibility:</u> 20, 25, 30 or 35 pension credits <u>Amount of Benefit:</u> At the Service Pension Commencement Date, a Participant will be entitled to receive a monthly benefit equal to his Normal Retirement Benefit actuarially reduced for early commencement. If the participant retired before January 1, 2018, the Service Pension is determined under the Plan rules in effect at that time.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Early Pension	<u>Eligibility:</u> An Employee is eligible for an Early Pension if the Employee has attained age 55 and has earned 15 pension credits. <u>Amount of Benefit:</u> Upon the Early Retirement Date, a Participant will be entitled to receive a monthly benefit equal to his Normal Retirement Benefit actuarially reduced for early commencement. If the participant retired before January 1, 2018, the Early Pension is determined under the Plan rules in effect at that time.
Disability Pension	<u>Eligibility:</u> Effective July 1, 2018 there is no disability benefit available to participants who were not already receiving benefits under disability.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Death Benefits	<u>Married:</u> If a participant is married and dies after earning the right to a Statutory Pension (5 years of service), the spouse will be entitled to a survivor benefit, as long as they were married for at least one year at the time of death. The spouse's monthly benefit is 75% of the benefit earned as of the day before death, subject to any reduction that would have applied for form of payment and payments before age 65. If the participant had not yet reached age 55, the benefit will be calculated as if they had reached age 55 and applied for an Early Retirement Pension immediately before death, with adjustment for form of payment and payments before age 65. <u>Unmarried:</u> For participant deaths after December 31, 2017, no death benefit is payable. If the participant died before January 1, 2018, death benefits are determined under the Plan rules in effect at that time
Special Death Benefit	For participant deaths after December 31, 2017, no death benefit is payable. If the participant died before January 1, 2018, death benefits are determined under the Plan rules in effect at that time

Actuarial Certification

We have prepared this actuarial report for use by the **Industry & Local 338 Pension Plan** (the “Plan”). This report has been prepared solely for the benefit of the Plan, and it is not complete without the accompanying discussion with a representative of Horizon Actuarial Services, LLC. This report should not be distributed to others not affiliated with the Plan or relied upon by any other person without prior written consent from Horizon Actuarial Services, LLC.

In preparing this report, we have relied on all the information and data provided by the Plan, including plan provisions and asset information, as being complete and accurate. We have not independently verified the accuracy or completeness of the data or information provided, but we have reviewed the data for reasonableness to the extent that we believe appropriate based on the purpose for which it has been used.

The valuation summarized in this report involves actuarial calculations that require assumptions about future events. These calculations are performed using actuarial models, the intended purpose of which is the estimation and projection of the Plan’s liabilities and assets, zone status, and other related information summarized herein. We believe that the assumptions and methods used in this report are reasonable individually and in the aggregate, and are appropriate for the purposes for which they have been used. However, other assumptions and methods could also be reasonable and could generate materially different results. We have relied on the input of experts in developing certain assumptions, such as mortality and the valuation interest rate. Because it is not possible or practical to model all aspects of a situation, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are immaterial in our judgment.

We have not performed a detailed analysis of the potential effects of risk on the Plan’s future financial condition, but have included a discussion of some risks that may significantly affect the Plan. A more detailed assessment of the risks could provide the Trustees with a better understanding of the risks inherent in the Plan and may include additional scenario testing, sensitivity testing, stress testing and stochastic modeling.

Future events and actual experience will vary from any assumptions we have used, and calculations prepared with actual data will vary from estimates or summaries used for modeling purposes. Actual future results will differ from our projections. As these differences arise, contributions and/or benefits may need to be adjusted to take these changes into account.

In our opinion, any methods, assumptions, and calculations are in accordance with the applicable provisions of the Internal Revenue Code and ERISA, and the procedures followed and presentation of results conform with generally accepted actuarial principles and practices. The undersigned consultants of Horizon Actuarial Services, LLC with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. There is no relationship between the Plan and Horizon Actuarial Services, LLC that affects our objectivity.



Mary Ann Dunleavy, ASA, EA, MAAA
Senior Consulting Actuary



Stanley I. Goldfarb, FSA, EA, MAAA
Actuary and Managing Consultant